IS : 5697 - 1970
(Reaffirmed 2016)

Indian Standard

SPECIFICATION FOR RIPPING CHISELS

UDC 621.911.3

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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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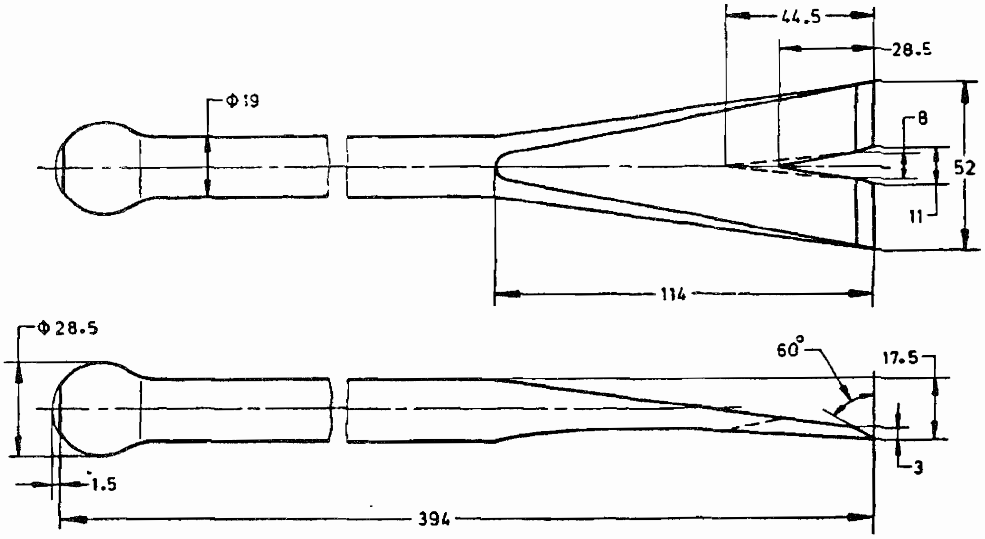
Alteration

(*Page* 4, *Fig.* 1) — Substitute the following for the existing figure:



All dimensions in millimetres.

FIG. 1 DIMENSIONS TOR RIPPING CHISELS

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Indian Standard
SPECIFICATION FOR RIPPING CHISELS

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(*Continued on page* 2)

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Indian Standard
SPECIFICATION FOR RIPPING CHISELS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 17 July 1970, after the draft finalized by the Hand Tools Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 This standard lays down the requirements for lipping chisels mainly employed for opening packing cases and similar other work. These chisels are not employed for cutting purposes.

0.3 While preparing this standaid assistance has been derived from IND/GS/486(c) 'Specification for chisels' issued by the Chief Inspectorate of General Stores, Ministry of Defence, Government of India.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2-1960*. The number of significant places obtained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standaid lays down the requirements for lipping chisels.

2. MATERIAL

2.1 The chisels shall be manufactured from good quality tool steel Steel conforming to T 75 of IS : 1570-1901† with a maximum sulphur and phosphorus content of 0.05 percent each is one of the suitable steels for this purpose

3. DIMENSIONS

3.1 The main dimensions of the lipping chisels shall be as given in Fig 1.

3.2 The dimensions may have a variation of ± 2 percent. Chisels which differ slightly in dimensions from those indicated in Fig. 1 may be accepted depending upon the agreement between the supplier and the purchaser.

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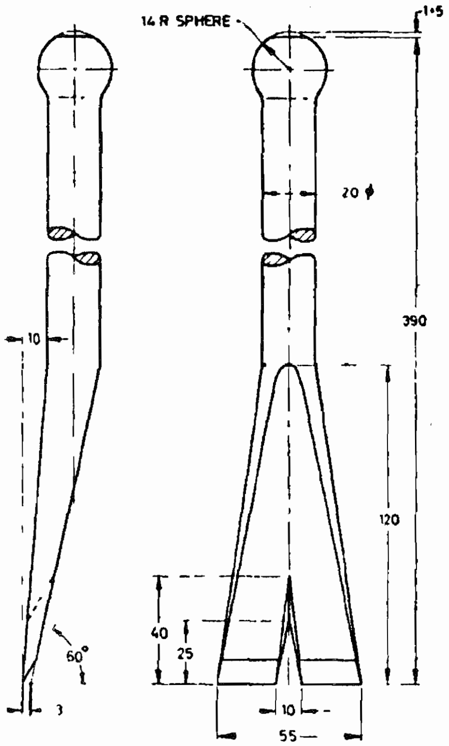
*Rules for rounding off numerical values (*revised*)

†Schedules for wrought steels for general engineering purposes.



All dimensions in millimetres.

FIG. 1 DIMENSIONS FOR RIPPING CHISELS

4. HARDNESS

4.1 The hardness of lipping chisels shall be within the range of 500 to 600 *HV* (*see* IS : 1501-1968*). The test point shall be as near to the working edge as practicable.

5. MANUFACTURE

5.1 The chisels shall be forged to shape in one piece from round bars. The chisels shall be free from flaws, seams, cracks, rust and other defects. They shall be finished smooth all over. The working edge shall be suitably hardened, tempered and ground true for ready use.

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*Method for Vickers hardness test for steel (*first revision*).

6. CONDITIONS OF SUPPLY

6.1 The supply conditions of chisels shall conform to those specified in IS : 1387-1967*.

7. MARKING

7.1 The chisels shall be clearly and legibly stamped with the manufacturer's name, initials or recognized trade-mark.

7.1.1 The chisels may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a will-defined system of inspection, testing and quality control during production This system, which is devised and supervised by ISI and opetated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufactures or processors, may be obtained from the Indian Standards Institution

8. PRESERVATIVE TREATMENT AND PACKING

8.1 The body of each chisel shall be coated with an anti-corrosive paint and the ground portion with anti-corrosive grease or varnish.

8.2 The chisels shall be sccurely packed in suitable packing cases of a size convenient for handling in transit, or bundled and secured suitably with wire, as may be specified by the purchaser.

9. SAMPLING

9.1 Unless otherwise agreed to between the supplier and the purchaser, the sampling plan as given in Appendix A shall be followed.

10. TESTS

10.1 Flaw Test - The working edge of each chisel while resting on a lead block shall withstand, without fracture or damage, 20 light blows with 500 g hammer.

10.2 Performance Test — The working edge of the chisel shall be tested by striking five times squarely on a mild steel block or by striking the working edge five times squarely with a mild steel flat 25 × 6 mm. On

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*General requirements for the supply of metallurgical materials (*first revision*).

completion of the test the working edge shall not show any sign of fracture, deformation or damage.

10.3 Load Test — The ripping chisel shall be rigidly gripped as shown in Fig. 2 and a load of 10 kgf shall be applied as indicated in the figure. The load shall be suspended for half a minute and at the end of this period, the ripping chisel shall not show any sign of distortion, damage or permanent set after making an allowance of 5 mm for initial set.

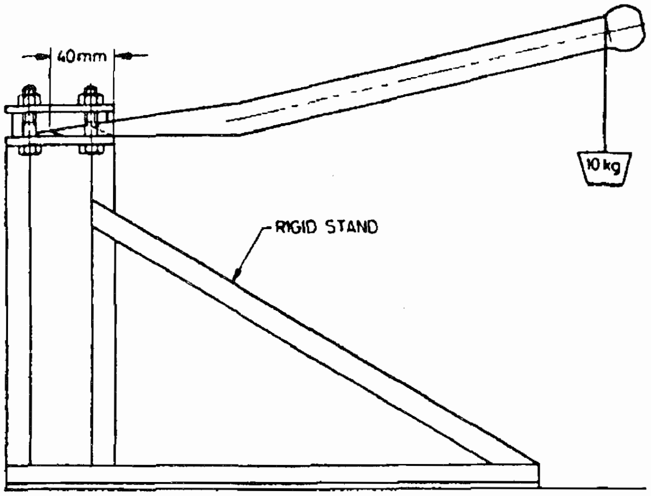

FIG. 2 LOAD TEST FOR RIPPING CHISELS

APPENDIX A

(*Clause* 9.1)

SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

A-1. SCALE OF SAMPLING

A-1.1 Lot — In any consignment all the chisels manufactured under essentially similar condition of manufacture shall be grouped together to constitute a lot.

A-1.2 For ascertaining the conformity of the lot to the requirements of this specification, tests shall be carried out for each lot separately. The number of chisels to be selected for this purpose shall be in accordance with col 1 and 2 of Table 1. To ensure the randomness of selection, IS : 4905-1968* shall be followed.

TABLE 1 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

LOT SIZE (1)	SAMPLE SIZE (2)	PERMISSIBLE NUMBER OF DEFECTIVES (3)	SUB-SAMPLE SIZE (4)
Up to 25	3	0	2
26 „ 50	5	0	2
51 „ 100	8	0	3
101 „ 150	13	1	4
151 „ 300	20	1	5
301 and above	32	2	8

A-2. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-2.1 All the chisels selected according to **A-1.2** shall be examined for dimensions (*see* **3**), hardness (*see* **4**) and manufacture (*see* **5**). Any chisel falling to meet the requirements of any one or more of the characteristics shall be considered defective.

A-2.1.1 If the number of defective chisels in the sample is less than or equal to the corresponding permissible number of defectives given in col 3 of Table 1, the lot shall be declared conforming to the requirements of characterstics mentioned in **A-2.1.**

A-2.2 From the lots found satisfactory in accordance with **A-2.1.1** a sub-sample of the size indicated in col 4 of Table 1 shall be selected and subjected to tests (*see* **10**).

A-2.2.1 If all the chisels subjected to tests satisfy the necessary requirements, the lot shall be declared as conforming to the requirements of this standard.

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*Methods for random sampling.

INDIAN STANDARDS
ON
Hand Tools

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274-(Part I & II)-1966	Shovels (*second revision*)	3.50
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843-1968	Smith's tongs (*first revision*)	5.00
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3152-1965	Needle files	2.00
3529-1966	Eyelet pliers	1.00
3552-1966	Flat nose pliers	1.50
3568-1966	Round nose pliers	1.50
3569-1966	Burner pliers	1.00
3587-1966	Rasps	3.50
3650-1960	Combination side cutting pliers	1.00
4005-1967	Pipe wrenches	4.00
4017-1967	Carpenters' squares	2.50
4057-1967	Carpenters' metal bodies bench planes	5.00
4095-1967	Carpenters' pincers	2.00
4123-1967	Chain pipe wrenches	3.50
4378-1967	Nippers	2.50
4481-1968	Duckbill pliers	2.00
4485-1968	Track spanners for railways	2.50
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4506-1968	Ballast forks	3.50
4508-1968	Shortened single ended open jaw spanners	3.50
4509-1968	Shortened single ended ring spanners	3.50
4806-1968	Heat coil pliers	2.00
4915-1968	Welders' chipping hammer	2.00
5006-1968	Battery terminal pliers	1.50
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